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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/876,451	06/07/2001	Joseph W. Walters	7103/238 (P0764)	9187

7590 11/13/2003

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EXAMINER

MACARTHUR, SYLVIA

ART UNIT	PAPER NUMBER
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1763

DATE MAILED: 11/13/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/876,451

Applicant(s)

WALTERS ET AL.

Examiner

Sylvia R MacArthur

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 June 2001 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>2</u> . | 6) <input type="checkbox"/> Other: |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-3, 8-10, 12, 13, 15-17, 19 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Ravkin et al (US 6,123,607).

Regarding claim 1: Ravkin teaches a method and apparatus for improved conditioning of polishing pads. Upon review of Fig. 2C it is noted that the polishing pad 43 travels in a forward direction, wherein the polishing pad has a first point traveling at a first velocity and a second point traveling at a second velocity, see the copy of reference marked by the examiner for reference. A non-rotatable conditioning member 40 engages the pad. Note the conditioning further comprises a primary edge and a secondary edge (where elements 44 and 46 rest respectively). Since the width along the conditioning member is the same and the velocity of each point along the pad is the same, the value of the product of the first velocity and first length is equal to the second velocity and second length.

Regarding claim 2: Fig. 2C illustrates that the contact surface of the conditioning member engages the polishing pad between the primary edge and the secondary edge.

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Regarding claim 3: Since the conditioning member has a rectangular shaped the primary edge and secondary edge form straight lines.

Regarding claim 8: Col. 4 lines 15-25 cites that pad 4 is mounted to a linear belt 2 in Fig. 1.

Regarding claim 9: Fig. 2C illustrates that the contact surface of the conditioning member engages the polishing pad between the primary edge and the secondary edge.

Regarding claim 10: Since the conditioning member has a rectangular shaped the primary edge and secondary edge form straight lines.

Regarding claim 12: The width of the conditioning is greater than the width of the pad as illustrated in Fig. 2C.

Regarding claim 13: Col. 4 lines 20-25 discusses that the slurry 12 (wet abrasive) is provided.

Regarding claim 15: Ravkin et al teaches that the belt in Figs. 4A and 4C is an orbital polishing tool (radial belt).

Regarding claim 16: Ravkin illustrates the contact surface of the conditioning member 60 that engages the polishing pad 37 between the primary edge and secondary edge.

Regarding claim 17: Ravkin shows that the conditioner features a primary and secondary edge with straight lines.

Regarding claim 19: The pad is illustrated in Fig. 4C as having a radius and that the length of the conditioning member is greater than the radius of the pad.

Regarding claim 20: See the explanation of claim 1 and 2.

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3. Claims 1, 2, 4,5, 7-9,11,12,14, and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Smith (US 5,484,323).

Smith teaches a belt cleaner.

Regarding claims 1, 8, and 20: Smith teaches a pad 6 traveling in a forward direction where the pad (linear belt) has a first point traveling a first velocity and a second point traveling as a second velocity the apparatus comprising: a nonrotatable conditioning member 4 with a primary and secondary edge. Note the conditioning further comprises a primary edge and a secondary edge. Since the width along the conditioning member is the same and the velocity of each point along the pad is the same, the value of the product of the first velocity and first length is equal to the second velocity and second length.

Regarding claims 2 and 9: Col. 2 lines 30-40 teaches that the cartridge holder (conditioning member 4) is applied to the surface of the abrasive belt 6.

Regarding claims 4, 5, and 11: Fig 2 illustrates that the primary and secondary edge of the conditioning member form curved lines. The curved lines of the conditioning member forms concave lines, see Fig. 2.

Regarding claims 7 and 14: The pad of Smith is a sanding belt, which anticipated a fixed abrasive polishing pad.

Regarding claim 12: The conditioning member of Smith has a width that is equal to the width or radius of the pad as illustrated in Fig. 2.

4. Claims 1, 2, 4-9,11, 12, 14-16, and 18 and 20 are rejected under 35 U.S.C. 102(e) as being anticipated by Lacy (US 6,554,688).

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Regarding claims 1, 8, and 20: Lacy teaches a method and apparatus for conditioning a polishing pad with sonic energy. The apparatus comprises a polishing pad 28 that travels in a forward direction where the pad has a first point traveling a first velocity and a second point traveling as a second velocity the apparatus comprising: a non-rotatable conditioning member 37 with a primary and secondary edge. Note the conditioning further comprises a primary edge and a secondary edge. Since the width along the conditioning member is the same and the velocity of each point along the pad is the same, the value of the product of the first velocity and first length is equal to the second velocity and second length.

Regarding claims 2 and 9: Lacy illustrates in Fig. 7 that the conditioning member comprises a contact surface configured to engage the pad between the primary edge and secondary edge.

Regarding claims 4-6, 11, and 18: Lacy illustrates that the primary and secondary edge form curved lines. Figures 1 and 2 illustrates that the lines are concave. While Figure 7 illustrates that the lines are convex.

Regarding claim 12: Col. 4 lines 52-55 illustrates that the sonic generator has a length L that is equal to the width W of the pad.

Regarding claim 14: Col. 4 lines 15-24 discussed that the pad comprises a fixed abrasive pad.

Regarding claims 15 and 16: Fig. 6 illustrates a polishing pad mounted on a radial belt. The figure also illustrates that the conditioning member engages the pad between the primary and secondary edges.

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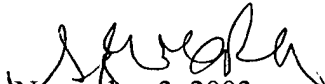
Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sylvia R MacArthur whose telephone number is 703-306-5690. The examiner can normally be reached on M-F during the core hours of 8 a.m. and 2 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory L. Mills can be reached on 703-308-1633. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

Sylvia R MacArthur
Patent Examiner
Art Unit 1763


November 3, 2003